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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/804,707      | 03/19/2004  | Michael Maschke      | P04,0086            | 7519             |

7590  
SCHIFF HARDIN LLP  
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Chicago, IL 60606

04/05/2007

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| EXAMINER |
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CHAO, ELMER M

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3737

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/05/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/804,707

Applicant(s)

MASCHKE, MICHAEL

Examiner

Elmer Chao

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/26/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 07/19/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Acknowledgement is made of the amendment filed 12/26/2006.

#### ***Response to Arguments***

2. Applicant's arguments filed 12/26/2006 have been fully considered but they are not persuasive.
3. Regarding Applicant's arguments concerning the interpretation of the electromagnets taught in Figure 11 of the Lemelson patent, Examiner disagrees with Applicant. Column 14, lines 3-7 state that the catheter may be "selectively-shaped" when using electromagnets disposed along the catheter wall. One skilled in the art would not at most interpret the language to mean the limited ability of only turning on or off the electromagnets. Instead, due to the perennial desire for the precise navigation of in-vivo catheters, one skilled in the art would certainly interpret the passage to include driving the electromagnets at different current levels to induce different magnetic moments within the catheter, thereby causing precise shaping of the catheter, as one of ordinary skill in the art would understand. One with a knowledge of the relationship between the amount of current fed to an electromagnet and the corresponding magnetic moment would surely regard Lemelson's invention to imply the use of different non-zero current levels in light of the language "...making it possible to selectively shape the catheter inside the patient." (col. 14, lines 6-7). Examiner believes that those skilled in the art of electromagnetic catheter navigation would possess this knowledge and

immediately see the certainty of such an interpretation. Specifically, the verb "shape" (col. 14, line 6) automatically implies a large variation of controls and most certainly does not limit an operator to only select a uniform current for all of the electromagnets being driven. Instead, one skilled in the art of catheter navigation would understand that the verb "shape", as used in the context of catheter navigation, involves contorting the catheter in all different shapes (because catheter navigation throughout the body requires such contortion), and in the case of columns 13 and 14, figure 11 of the Lemelson patent, that would require the use of different amounts of currents for different electromagnets within the catheter.

4. Even if Examiner were to limit the interpretation of Lemelson's teachings to only activating and deactivating the electromagnets of Figure 11, a deactivated electromagnet *does* exhibit a different magnetic moment as compared to an activated electromagnet. One of ordinary skill in the art, may it be in the art of catheters or electromagnetism, when given a catheter with multiple electromagnets, some of which are activated and some of which are not, would surely be able to verify that the electromagnets exhibit respectively different magnetic moments. The bottom line is that when comparing an electromagnet with a zero magnetic moment to an electromagnet with a non-zero magnetic moment, one skilled in the art would agree that the two electromagnets exhibit respectively different magnetic moments, since zero is a number which is considered "different" from any non-zero number.

5. Given the above reasons, Lemelson's teaching in column 14, lines 3-7 inherently includes a current supply as recited in the newly amended claims, and the current

Art Unit: 3737

supply would also be fully capable of supplying respective currents thereto to cause said plurality of electromagnets with current supplied thereto to exhibit respectively different magnetic moments. Similarly, regarding claim 4, the current supply would be fully capable of driving the electromagnets with synchronously clocked currents. This can be achieved by controlling the simultaneous activation and deactivation of the electromagnets, which would be a function of the operator.

6. Examiner would like to remind Applicant that the claims in the present applicant are drawn to a system and not to a method. Any recited functional language will be interpreted as the ability for the claimed system to perform such functions. Applicant's intentions to limit the functional scope of the claims would be conveyed best by adding structural limitations to the claims.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson (U.S. 5,845,646) in view of Koch (U.S. 6,052,610).

**Regarding claims 1-3**, Lemelson ('646) teaches a catheter with electromagnets along a desired length of the catheter, so that the catheter can be selectively shaped. Lemelson ('646) does not explicitly teach a catheter having a magnet at the tip. Koch ('610) teaches a permanent magnet at the tip of a catheter so that the catheter can be tracked (C2, L65-67). Koch also teaches that alternatively, an electromagnet can be used in place of a permanent magnet at the tip of catheter (C3, L2-5). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Lemelson ('646) by including a permanent magnet or an electromagnet at the tip of the catheter as taught by Koch ('610) in order to create a catheter that can have its position tracked. Furthermore, such a modification would create a catheter that is capable of being tracked while navigating through the human body, which is well-known to one of ordinary skill in the art.

**Regarding claim 4**, the electromagnets along the desired length of the catheter would be capable of being controlled with synchronously-clocked currents. The current supply would also be fully capable of supplying respective currents.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3737


mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmer Chao whose telephone number is (571)272-0674. The examiner can normally be reached on 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ELMER CHAO  
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